

KENWOOD

CONTROL AMPLIFIER

KC-991

INSTRUCTION MANUAL

KENWOOD CORPORATION

Introduction

Your choice of this product indicates that you are a devotee to excellence in sound reproduction.

We appreciate your patronage and take pride in the long tradition of quality components that our company represents. So that you can get the most out of your unit, we suggest that you take the time to read through this manual before you hook up and operate your system. This will acquaint you with operating features and system-connection considerations so that your listening pleasure will be enhanced right from the start. You will notice that in all aspects of planning, engineering, styling, operating convenience and adaptability we have sought to anticipate your needs and desires.

Keep this manual handy for future reference.

For your records

Record the serial number, found on the back of the unit, in the spaces designated on the warranty card, and in the space provided below. Refer to the model and serial numbers whenever you call upon your dealer for information or service on this product.

Model _____ Serial Number _____

Unpacking

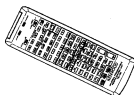
Unpack the unit carefully and make sure that all accessories are put aside so they will not be lost.

Examine the unit for any possibility of shipping damage. If your unit is damaged or fails to operate, notify your dealer immediately. If your unit was shipped to you directly, notify the shipping company without delay. Only the consignee (the person or company receiving the unit) can file a claim against the carrier for shipping damage.

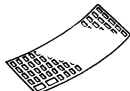
We recommend that you retain the original carton and packing materials for use should you transport or ship the unit in the future.

Accessories

Remote control unit.....1
AC plug adaptor.....1
(except for some areas)
For the unit with a European AC
plug in areas other than Europe.



Battery ("AAA" or "R03").....4
Overlay sheet.....1



Audio cord.....1
System control cord.....1



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Caution: Read the pages marked ⚠ carefully to ensure safe operation.

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⚠ Caution: Read this page carefully to ensure safe operation.

Before applying power

For the U.S.A. and Canada

Important!

Units shipped to the U.S.A. and Canada are designed for operation on 120 volts AC only.

CAUTION: TO PREVENT ELECTRIC SHOCK DO NOT USE THE AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.

For the United Kingdom

Important!

Units shipped to the U.K. are designed for operation on 240 volts AC only.

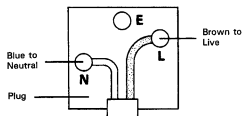
The mains plug must be removed from the wall socket prior to any internal examination.

The wires in this mains lead are coloured in accordance with the following code:

Blue	Neutral
Brown	Live

The wires in this mains lead must be connected to the terminals in the plug as follows:

Wire colour	Plug terminal marking
Blue	N or Black
Brown	L or Red



Notes:

1. If a 13-amp plug is used, this must be fitted with a 5-amp fuse.
2. If a 3-pin plug with earthing contact is used, no wire must be connected to the E terminal.

For Australia and Europe

Important!

Units shipped to Australia are designed for operation on 240 V AC only.

Units shipped to Europe are designed for operation on 230 V AC only.

For other countries

Important!

Units shipped to countries other than the above countries are equipped with an AC voltage selector switch on the rear panel. Refer to the following paragraph for the proper setting of this switch.

AC voltage selection

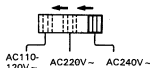
This unit operates on 110-120 or 220-240 volts AC. The AC voltage selector switch Type A or Type B on the rear panel is set to the voltage that prevails in the area to which the unit is shipped. Before connecting the power cord to your AC outlet, make sure that the setting position of this switch matches your line voltage. If not, it must be set to your voltage in accordance with the following direction.

Note:

Our warranty does not cover damage caused by excessive line voltage due to improper setting of the AC voltage selector switch.

AC voltage selector switch

Type A



Type B



Move switch lever to match your line voltage with a small screwdriver or other pointed tool.

Safety precautions

WARNING: TO PREVENT FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE.



CAUTION

RISK OF ELECTRIC SHOCK
DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE COVER (OR BACK). NO USER-SERVICEABLE PARTS INSIDE, REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.



THE LIGHTNING FLASH WITH ARROWHEAD SYMBOL, WITHIN AN EQUILATERAL TRIANGLE, IS INTENDED TO ALERT THE USER TO THE PRESENCE OF UNINSULATED "DANGEROUS VOLTAGE" WITHIN THE PRODUCT'S ENCLOSURE THAT MAY BE OF SUFFICIENT MAGNITUDE TO CONSTITUTE A RISK OF ELECTRIC SHOCK TO PERSONS.



THE EXCLAMATION POINT WITHIN AN EQUILATERAL TRIANGLE IS INTENDED TO ALERT THE USER TO THE PRESENCE OF IMPORTANT OPERATING AND MAINTENANCE (SERVICING) INSTRUCTIONS IN THE LITERATURE ACCOMPANYING THE APPLIANCE.

IMPORTANT SAFEGUARDS

⚠ Caution : Read this page carefully to ensure safe operation.

Please read all of the safety and operating instructions before operating this unit. For best results, follow all warnings placed on the unit and adhere to the operating and use instructions. These safety and operating instructions should be retained for future reference.

1. Power sources — The unit should be connected to a power supply only of the type described in the operating instructions or as marked on the appliance.

2. Power-cord protection — Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, pay particular attention to cords at plugs, convenience receptacles, and the point where they exit from the unit.

Never pull or stretch the cord.



3. Grounding or polarization — The precautions should be taken so that the grounding or polarization means of this unit is not defeated.

4. Ventilation — The unit should be situated so that its location or position does not interfere with its proper ventilation.

To maintain good ventilation, do not put records or a table-cloth on the unit. Place the unit at least 10 cm away from the walls.

Do not use the unit on a bed, sofa, rug or similar surface that may block the ventilation openings.

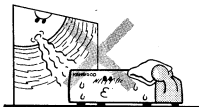


5. Water and moisture — The unit should not be used near water — for example, near a bathtub, washbowl, kitchen sink, laundry tub, in a wet basement, or near a swimming pool, etc.



6. Temperature — The unit may not function properly if used at extremely low, or freezing temperatures. The ideal ambient temperature is above +5°C (41°F).

7. Heat — The unit should be situated away from heat sources such as radiators, heat registers, stoves, or other units (including amplifiers) that produce heat.



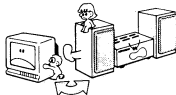
8. Electric shock — Care should be taken so that objects do not fall and liquid is not spilled into the enclosure through openings. If a metal object, such as a hair pin or a needle, comes into contact with the inside of this unit, a dangerous electric shock may result. For families with children, never permit children to put anything, especially metal, inside this unit.



9. Enclosure removal — Never remove the enclosure. If the internal parts are touched accidentally, a serious electric shock might occur.



10. Magnetic fields — Keep the unit away from sources of magnetic fields such as TV sets, speaker systems, radios, motorized toys or magnetized objects.



11. Cleaning — Do not use volatile solvents such as alcohol, paint thinner, gasoline, or benzene, etc. to clean the cabinet. Use a clean dry cloth.



- 12. Carts and stands** — An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.



- 13. Nonuse periods** — The power cord of the unit should be unplugged from the outlet when left unused for a long period of time.

- 14. Abnormal smell** — If an abnormal smell or smoke is detected, immediately turn the power OFF and pull out the power cord. Contact your dealer or nearest service center.

POWER OFF!



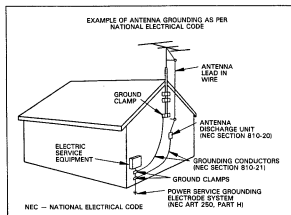
- 15. Damage requiring service** — The unit should be serviced by qualified service personnel when:

- A. The power-supply cord or the plug has been damaged; or
- B. Objects have fallen, or liquid has been spilled into the unit; or
- C. The unit has been exposed to rain; or
- D. The unit does not appear to operate normally or exhibits a marked change in performance; or
- E. The unit has been dropped, or the enclosure damaged.

- 16. Servicing** — The user should not attempt to service the unit beyond that described in the operating instructions. All other servicing should be referred to qualified service personnel.

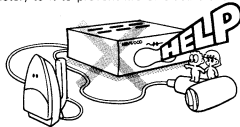
- 17. Outdoor antenna grounding** — If an outside antenna is connected to the receiver, be sure the antenna system is grounded so as to provide some protection against voltage surges and built up static charges. Section 810 of the National Electrical Code, ANSI/ NFPA No. 70—1984, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding con-

ductors, location of antenna-discharge unit, connection to grounding electrodes, and requirements for the grounding electrode. See Figure.



- 18. Power lines** — An outdoor antenna should be located away from power lines.

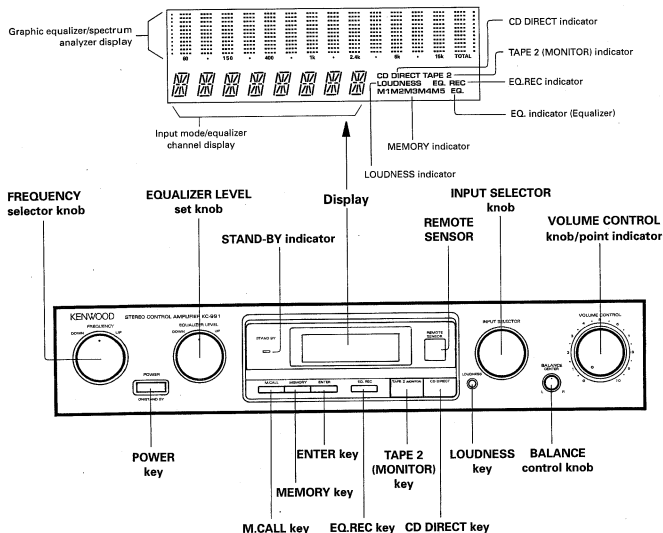
- 19. AC outlets** — Do not connect other audio equipment with a power consumption larger than that specified to the AC outlet on the rear panel. Never connect other electrical units, such as an iron or toaster, to it to prevent fire or electric shock.



Notes:

- 1. Item 3 is not required except for grounded or polarized equipment.
- 2. Item 17 and 18 are not required except for units provided with antenna terminals.
- 3. Item 17 complies with UL in the U.S.A.

Controls and indicators

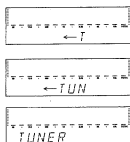


STAND BY mode of POWER key

When the power cord of this system is plugged into an AC outlet, the STAND BY indicator lights up regardless of the ON/OFF setting of the POWER key. This indicates that a small amount of current is being supplied to the unit to back up the memory contents and support the timer function. This mode is referred to as the Stand By mode. While the STAND BY indicator is lit, the power of the system can be switched ON/OFF from the remote control unit.

Scroll function

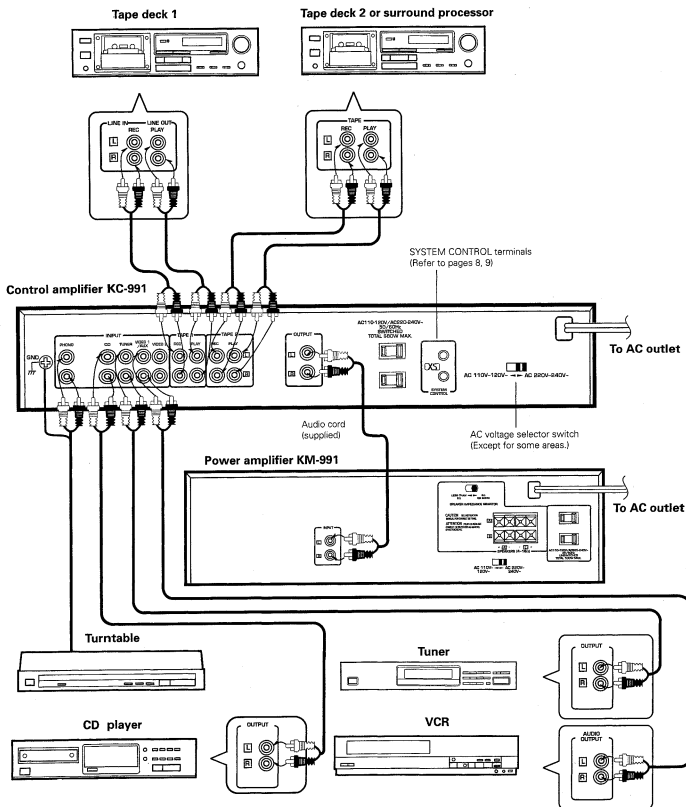
When a source is selected with the INPUT SELECTOR, source name characters on the display flow from the right to the left and stop at the center.



System connections

Make connection as shown below. When connecting the related system components, refer also to the instruction manuals of the related components.

Do not plug in the power lead until all connections are completed.



Notes:

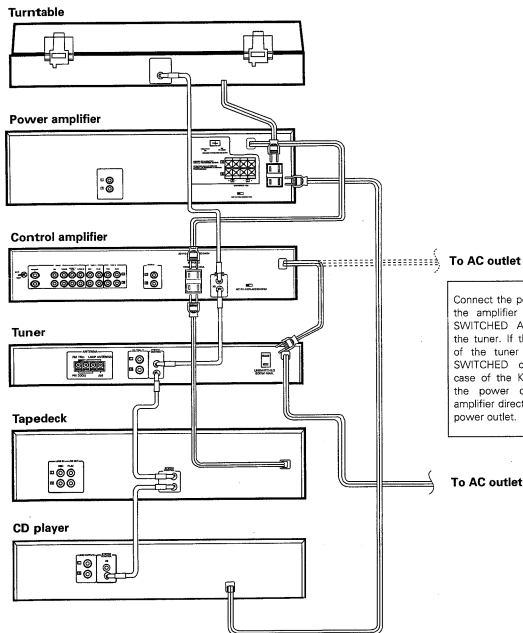
1. Connect all cords firmly. If connections are loose there could be loss of sound or noise produced.
2. When plugging and unplugging connection cords, be sure to first remove the power cord from the AC outlet. Plugging/unplugging connection cords without removal of the power cord can cause malfunctions or damage to the unit.
3. Do not connect up a power source which is larger than that indicated on the socket at the rear of the unit.

System control operation

For the system control of KENWOOD system components, connect them using the system control cords as shown in the illustration below.

If the power cords are connected as shown in the illustration, the power of the whole system can be switched ON/OFF from the POWER key on the amplifier.

(For the audio cord connection, please refer to "System connections".)



To AC outlet

Unit destination	Shape of the AC outlet
For U.S.A., Canada and U.S. Military	
For Australia	
For other countries	

SWITCHED AC outlet

The power of the component connected to this kind of AC outlet is switched ON/OFF in interlocked operation with the POWER key on the main unit on which the AC outlet is installed.

UNSWITCHED AC outlet

The power of the component connected to this kind of AC outlet can be switched ON/OFF regardless of the POWER key on the main unit.

■ Operation

By connecting this unit to other KENWOOD system components equipped with SYSTEM CONTROL terminals, such as a tuner, tape deck, CD player and/or turntable, the following convenient operations will be available.

Automatic play operation

When starting play with the turntable, tape deck, or CD player connected to this unit, set the INPUT SELECTOR knob to PHONO, TAPE or CD. The turntable, tape deck, or CD player will automatically enter the play mode.

In the same way, pressing the Play key of the turntable, tape deck, or CD player will automatically switch the INPUT SELECTOR setting on this unit to the component on which the play key is pressed.

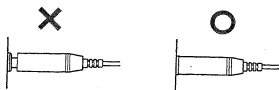
Synchro recording

To record the sound from the CD player or turntable onto a tape with the tape deck, set the INPUT SELECTOR knob to CD or PHONO and load a CD or record. Set the tape deck to record-pause mode, then press the Play (START) key of the CD player or turntable. The deck will start recording automatically, synchronized with the CD player or turntable starting playing. For more details, refer to the instruction manual of the tape deck.

Remote control

When the amplifier, tuner, tape deck, CD player, and turntable are connected via the system control cords, these components can be controlled from the remote control unit supplied with this unit.

System control connection

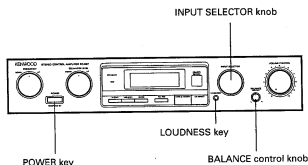


- Be sure to insert the system control cord plugs fully into the SYSTEM CONTROL terminals.
- If the system control cord and audio cords are not connected properly, the automatic system governing remote control and system functions will not operate.

Notes:

1. System control operation of the unit connected to the TAPE 2 jacks cannot be carried out.
2. If the components connected to this unit are not KENWOOD system components, do not connect anything to the SYSTEM CONTROL terminals.

Operating instructions

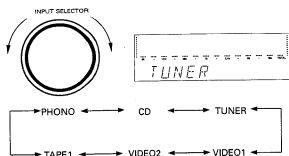


Basic operation

1 Press the POWER key to ON.



2 Set the INPUT SELECTOR to select the source to be played.



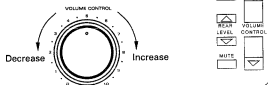
The source name characters appear on the display in the cycle as shown above.

- Do not set the INPUT SELECTOR knob in the mid position between click positions.

3 Play the source component.

- The selected source component is played automatically if it is connected using a system control cord.

4 Adjust the volume.



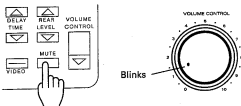
5 Adjust the left and right volume balance.



- For the tone control, refer to "Graphic equalizer operation" (page 13).

To mute the sound temporarily

Press the MUTE key on the remote control unit.



- The indicator on the VOLUME CONTROL knob on the front panel blinks.
- Pressing the key again resumes the previous volume.

Function of the LOUDNESS key

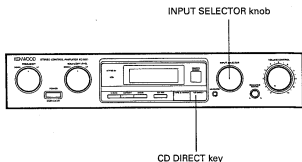
While dynamic sound can be experienced at high volume levels, music may become flat with poor bass when the volume is set low.

To compensate for this, press the LOUDNESS key when the VOLUME CONTROL is set to a low level. The bass will be boosted making the sound richer and fuller.



Notes:

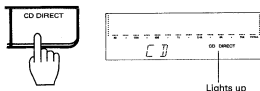
- When the TAPE 2 key is set to ON, the source selected with the INPUT SELECTOR cannot be heard from the speakers. To listen to a source other than cassette deck 2, be sure to set the TAPE 2 key to OFF.
- The source selected with the INPUT SELECTOR is backed up for a few days even when the power cord is unplugged. After this period, the tuner is automatically selected when the power is supplied.



■ Operation of CD DIRECT playback

The digital sound of Compact Disc features an ideal reproduction characteristics, and the sound quality provided by CD can be reproduced with least degradation by means of the CD direct playback function.

1 Press the CD DIRECT key.

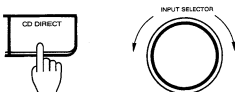


2 Play the CD player.

- The CD DIRECT selection is given priority to any other source being selected by the INPUT SELECTOR.

To cancel the CD DIRECT playback function

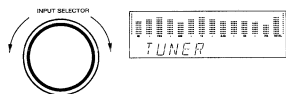
Press the CD DIRECT key again, or select the INPUT SELECTOR.



Note:
During CD DIRECT playback, the graphic equalizer does not function.

■ Listening to CD while recording another source

1 Select the source to be recorded.



2 Play the source to be recorded.

3 Start recording on the cassette deck connected to the TAPE 1 jacks.

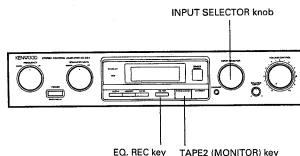
- When the EQ.REC key is pressed, the sound can be recorded together with the equalizer effect.

4 Press the CD DIRECT key.



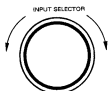
5 Play the CD player.

- No other source can be selected until the cassette deck recording is stopped.
- The source name on the display remains the same, i.e. the name of the recorded source.



■ Ordinary tape recording

1 Select the source to be recorded.



2 Set cassette deck 1 or 2 in the record-pause mode.

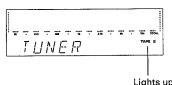
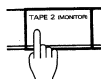
- When the EQ. REC key is pressed, the sound can be recorded together with the equalizer effect.

3 Play the source component to be recorded, and start recording it on the cassette deck.

- In case of tape dubbing (TAPE 1→TAPE 2), play the cassette deck connected to TAPE 1 and record on the cassette deck connected to TAPE 2.

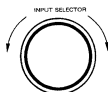
■ Tape dubbing (TAPE2 → TAPE1)

1 Press the TAPE 2 key.



Lights up

2 Select a source other than TAPE 1.

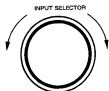


3 Play cassette deck 2 and start recording on cassette deck 1.

- Do not select TAPE 1 while dubbing.
- When the EQ. REC key is pressed, the sound can be recorded together with the equalizer effect.

■ Recording sound with equalizer effect applied (TAPE 1 only)

1 Select the source to be recorded.



2 Create a desired equalizer pattern.

- Create an equalizer pattern referring to "Graphic equalizer operation" on pages 13 and 14.
- The equalizer pattern recalled using the M.CALL key can also be used in recording.
- The EQ. indicator lights up on the bottom right of the display.

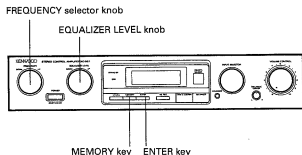
3 Press the EQ. REC key.



Lights up

4 Start recording.

Graphic equalizer operation

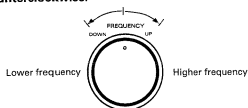


■ Creation of equalizer pattern

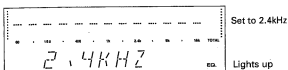
The graphic equalizer can be operated using the FREQUENCY selector and EQUALIZER LEVEL control. The equalizer is activated any time when one of these knobs is turned.

1 Select the frequency band to be adjusted.

Turn the FREQUENCY selector clockwise or counterclockwise.

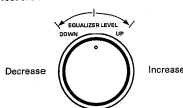


Example: Increasing the level of 2.4kHz band

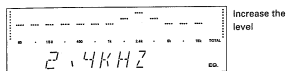


2 Adjust the level.

Turn the EQUALIZER LEVEL control clockwise or counterclockwise.



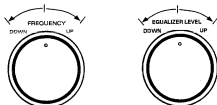
Example: Increasing the level of the 2.4kHz band



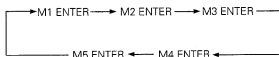
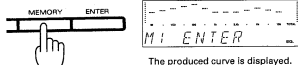
3 If there are other frequency bands to be adjusted, repeat steps 1 and 2 for each of them.

■ Storing user-created pattern

1 Create the equalizer pattern to be stored in memory.

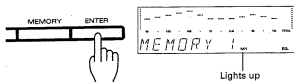


2 Select the memory No. used to store the pattern.

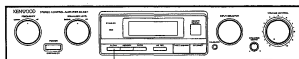


Every time the MEMORY key is pressed, the memory Nos. are switched in the cycle as shown above.

3 Press the ENTER key to store in memory.



- Press within 5 seconds after selecting the memory No.



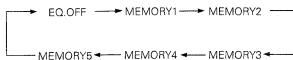
M.CALL key

■ Recalling a pattern from memory

Press the M.CALL key to select the memory No. storing the desired pattern.

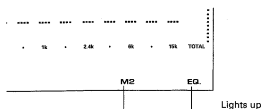


Remote Control



Every time the MEMORY key is pressed, the memory Nos. are switched in the cycle as shown above.

The example shows MEMORY2 recalled.



Lights up

■ Turning off the graphic equalizer

Press the M.CALL key
Press and hold until
the equalizer is
turned OFF.

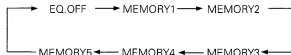


Press the EFFECT key
on the remote
control unit.

Remote Control



- When the key is pressed again, the equalizer is turned ON again and the previous equalizer pattern is recalled.



Every time the MEMORY key is pressed, the memory Nos. are switched in the cycle as shown above.



Goes out

Contents of display

Spectrum analyzer display

Displays the frequency distribution of the source being played to allow understanding at a glance.

Graphic equalizer display

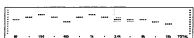
Shows how each frequency range is compensated. The graphic equalizer display also appears for about seconds, even while the unit is in the spectrum analyzer display mode, when one of the following operations is performed.

- Switching power ON.
- An operation key associated with an equalizer operation is pressed.

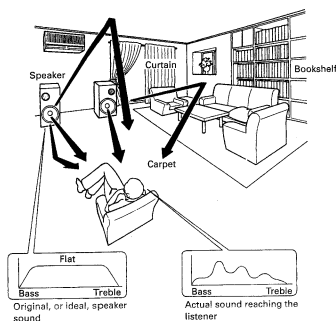
Spectrum analyzer display



Graphic equalizer display



■ Functions of the graphic equalizer



Compensation for the audio characteristics of the listening room

The listening room may contain several objects. Some of them reflect sound and some absorb sound, thus the sound reaching your ears is considerably affected by these objects. In such cases, the graphic equalizer can be used to adjust the frequency response of the room for a flat response from low to high frequencies.

- Low frequencies are absorbed by beds, chairs, etc.
- High frequencies are absorbed by curtains, screens, etc.
- The room structure can cause the low frequencies to be unclear, or the sound level to increase or decrease depending on the frequency.

Adjustment of sound to your individual taste

When the reproduced sound contains several musical instruments and voices, the graphic equalizer allows you to enhance or attenuate the sound of specific instruments or voices.

Sound equalization

Super bass range (60 Hz)

When this control is moved up, the bass instrument (double bass, bass drums, or pipe organ, etc.) sound is increased. When the super bass sound is boomy, move this control down.

Bass range (150 Hz)

Usually, the listening room resonance frequency is in this range. To eliminate bass resonance, move this control down.

Mid-bass range (400 Hz)

This range is the basis of music. Whether the sound is rich or not, depends on this range. When the playback sound is not so good, move this control up.

Mid range (1 kHz)

When this control is moved up or down, the baritone or soprano voice is emphasized/de-emphasized. This range is related to the "presence" of music.

Mid-high range (2.4 kHz)

This range is related to stimulus and metallic sound. When this range is well compensated, vivid sound can be obtained.

High range (6 kHz)

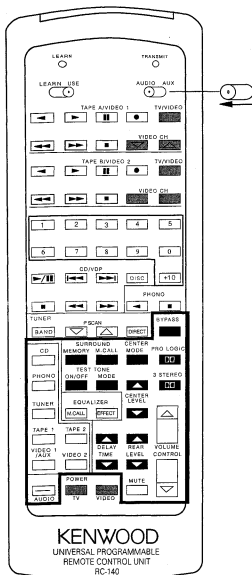
This frequency range is related to the hardness of the sound. When this control is moved up, strings or brass instruments, such as flutes or piccolos, are emphasized. When the control is moved down, the sound will be more soothing.

Super high range (15 kHz)

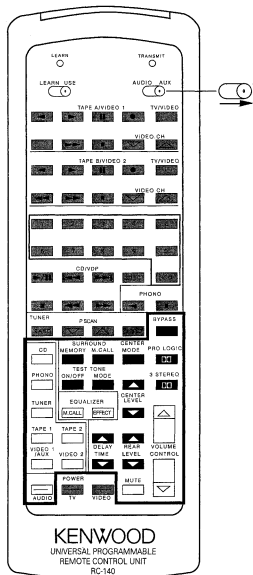
This frequency range is related to the details of the music. When this control is moved up, super high frequency instruments, such as triangles or cymbals, are emphasized, resulting in wide sound and echoes.



Modes

AUDIO mode



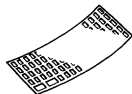
AUX mode



- Keys masked with  are not usable with this system because the use of the RC-140 is shared by other systems. Use these keys to program other remote control signals.
- Keys masked with  are space keys which do not contain any signal preset at the factory. Use these keys to program other remote control signals.
- Keys in the area enclosed by thick lines contain same function signals for the AUDIO and AUX modes. These keys can be used in the same way in both modes. These keys can also be programmed, if necessary, when in the LEARN mode.

Overlay sheet

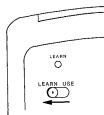
The provided overlay sheet offers a convenient way to record and remember the contents programmed under the various operation keys. Write the programmed key contents on the overlay sheet with an oil-based felt-tipped marker or pencil. To erase, use a conventional eraser. Before use, be sure to peel off the covering sheet.



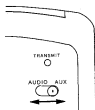
■ Programming operation

Use the following procedure to program remote control signals of other remote control units in the RC-140.

- 1** ① Set the LEARN/USE switch to the LEARN position.

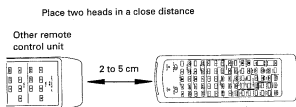


- ② Set the MODE switch to the desired mode.



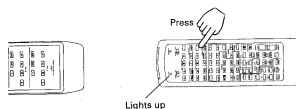
- 2** Position the remote control unit containing the signal to be programmed and the RC-140 so that their transmitters face each other.

- The distance between the remote control units is about 2 to 5 cm (13/16" to 2").



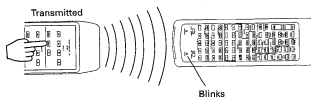
- 3** Press one of the RC-140's "learning" keys to be used to program the signal.

- The LEARN indicator lights up.



- 4** Within 30 seconds after pressing the "learning" key, press the key of the other remote control unit containing the signal to be programmed.

- Programming is complete when the lighted LEARN indicator goes out after blinking twice.
- Hold the key of the other remote control unit depressed until the LEARN indicator goes out.
- To program another remote control signal, repeat steps 2 to 4 again.



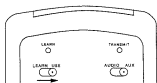
Notes:

- If the optical output level of the other remote control unit is higher, programming may not be carried out correctly. If this occurs, separate the RC-140 and the other remote control unit by a greater distance and perform the programming procedure again.
- If the LEARN and TRANSMIT indicators blink simultaneously during programming, this indicates either that the key being programmed cannot be programmed or that programming has not been performed completely. If this occurs, perform the programming procedure again.
- Remote control functions using signals other than infrared signals or specially-coded signals cannot be programmed. Programming is also impossible when the RC-140's memory capacity becomes full.

- The LEARN indicators goes out 30 seconds after a "learning" (programmable) key is pressed. After this, programming is impossible. To continue programming, press the "learning" (programming) key again.
- When two or more "learning" keys are pressed at the same time, the remote control function of the other remote control unit will be programmed under the key which was pressed last.
- Do not program the remote control functions of equipment other than AV components, such as air conditioners, etc.

■ To check the programmed contents

- 1 Set the LEARN/USE switch to the USE position.



- 2 Set the mode.

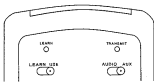
- Set to the mode used with the key to be checked.

- 3 Press the key to be checked.

- Verify that the component to be operated works correctly.

■ Normal remote control operation

- 1 Ensure that the LEARN/USE switch is in the USE position.



- 2 Set the mode.

- Set to the mode used with the key to be used.

- 3 Press a key under which the remote control signal has been programmed.

- The TRANSMIT indicator lights and the target component operates as intended.

■ To change the programmed contents

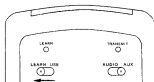
Perform the programming operation again referring to "Programming operation" on the previous page.

- The previously-programmed content is cleared automatically and replaced by the newly-programmed content.

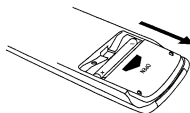
■ To clear the entire programmed contents

With a single procedure, you can clear all of the remote control functions which have been programmed under the "learning" keys of both modes, returning the RC-140 to the initial status.

- 1 Set the LEARN/USE switch to the LEARN position.



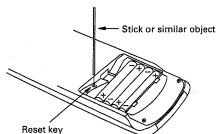
- 2 Remove the battery case cover.



- 3 Press any one of the "learning" keys.

- The LEARN indicator lights up.

- 4 Press the reset key.



- The reset key must be pressed within 30 seconds of pressing one of the learning keys.

In case of difficulty

What appears to be a malfunction may not always be serious. If your unit should not perform as expected, consult the table below to see if the problem can be corrected before seeking help from your dealer or service representative.

Amplifier, speakers

Symptom	Cause	Remedy
Sound is not output.	<ul style="list-style-type: none"> ● Poor connection at wall outlet. Power outlet inactive. ● The volume is set to the minimum position. ● The MUTE key is set to ON and the point indicator is blinking. 	<ul style="list-style-type: none"> ● Check outlet using a lamp or other appliance (outlet may be controlled by a wall switch). ● Adjust the volume to a proper level. ● Press the MUTE key of the remote control unit to OFF.
Sound is not output from one of the speakers.	<ul style="list-style-type: none"> ● The speaker cord is disconnected. ● The BALANCE control is set to an extreme position. 	<ul style="list-style-type: none"> ● Connect it properly referring to "System connections". ● Adjust the Left / Right balance.
A hum noise is generated when the PHONO input selector key is pressed.	<ul style="list-style-type: none"> ● The audio cord from the turntable is not inserted securely into the PHONO jacks. ● The turntable is not grounded. 	<ul style="list-style-type: none"> ● Insert the audio cord plugs securely into the PHONO jacks. ● Connect the grounding wire to the GND terminal on the rear panel.

Remote control unit

Symptom	Cause	Remedy
Remote control operation is not possible.	<ul style="list-style-type: none"> ● Batteries are exhausted. ● The audio cords and the system control cords are not connected properly. ● The remote control unit is too far away from the main system, controlling angle is too large, or there is an obstacle in between. ● The source component to be operated does not contain the analog disk, tape(s) or CD. ● An attempt is made to play a tape which is being recorded in the cassette deck. ● The LEARN/USE select switch is set to LEARN. 	<ul style="list-style-type: none"> ● Replace with new batteries. ● Connect properly referring to "System connections". ● Operate the remote control unit within the controllable range. ● Place and analog disk, tape(s) or CD in the source component to be played. ● Wait until the recording is completed. ● Set the LEARN/USE switch to USE.

Notes:

1. This system is microprocessor-controlled, so malfunction may occur due to external noise or interference noise. In such a case, unplug the power cord, plug it and turn power on again.
2. Do not use contact cleaners because it could cause a malfunction. Be specially careful against contact cleaners containing oil, for they may deform the plastic components.

Specifications

 **Caution:** Read this page carefully to ensure safe operation.

Performance

Input Sensitivity	
PHONO	2.5 mV/47 k Ω
TUNER/TAPE/CD/VIDEO	200 mV/47 k Ω
Signal-to-Noise Ratio (IHF-A)	
PHONO	80 dB for 2.5 mV input
TUNER/TAPE/CD/VIDEO	101 dB
Phono Maximum Input Level	100 mV, T.H.D. 0.3% at 1 kHz
Total Harmonic Distortion	
20 Hz to 20 kHz	0.005% at rated output
Loudness Control	+8 dB at 100 Hz (at -30 dB VOLUME Level)
Graphic equalizer control	
(60 Hz, 150 Hz, 400 Hz, 1 kHz, 2.4 kHz, 6 kHz, 15 kHz)	± 10 dB
Output Voltage and Impedance	
Tape REC	200 mV/220 Ω
PRE OUT	1 V/2.2 k Ω

General

Power Consumption	15 W
AC outlets	
SWITCHED	For USA and Canada: 2; (Total 680 W, 5.6 A max.) For other countries: 2; (Total 420 W)
Dimensions	W: 440 mm (17-5/8") H: 85 mm (3-3/8") D: 277 mm (10-7/8")
Weight (Net)	3.8 kg (8.4 lb)

Note:

KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

For CANADA DOC REGULATION

"This digital apparatus does not exceed the CLASS B limits for radio noise emissions from digital apparatus as set out in the radio interference regulations of the Canadian department of communications."

For the U.S.A. FCC WARNING:

This equipment may generate or use radio frequency energy. Changes or modifications to this equipment may cause harmful interference unless the modifications are expressly approved in the instruction manual. The user could lose the authority to operate this equipment if an unauthorized change or modification is made.

NOTE:

This equipment has been tested and found to comply with the limits for a CLASS B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment may cause harmful interference to radio communications, if it is not installed and used in accordance with the instructions. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.